

REMARKS

Claims 1 – 28 are pending in the present Application. Claim 11 has been amended, leaving Claims 1 – 28 for consideration upon entry of the present Amendment. The present amendment does not raise any new issues, increase the number of claims, or require additional search. Entrance of the amendment is respectfully requested.

Claim 11 has been amended to correct a grammatical error. Support for this amendment can at least be found in Claim 11 as originally filed.

No new matter has been introduced by this amendment. Reconsideration and allowance of the claims are respectfully requested in view of the following remarks.

Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

Claim 4 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the term “substantially” is allegedly indefinite.

Claim 4 states:

The upflow reactor of Claim 1, wherein said vessel comprises a vessel having a structural geometry that is substantially cylindrical, substantially parallelepiped, substantially spherical, or a combination thereof.

MPEP 2173.05(c)(D) states:

The court held that the limitation “which produces substantially equal E and H plane illumination patterns” was definite because one of ordinary skill in the art would know what was meant by “substantially equal.” *Andrew Corp. v. Gabriel Electronics*, 847 F.2d 819, 6 USPQ2d 2010 (Fed. Cir. 1988).

Here, the term “substantially” is used to modify the geometries provided. As one of ordinary skill in the art readily understand the geometries, Applicants also contend that one of ordinary skill in the art would know what was meant by “substantially cylindrical, substantially parallelepiped, substantially spherical”. Since the terminology is readily understandable by one of ordinary skill in the art, the language is definite and meets the requirements of 35 U.S.C. §112, second paragraph. Reconsideration and withdrawal of this rejection are respectfully requested.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-28 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 4,669,890 to Peyrot. Applicants respectfully traverse this rejection. As previously stated, Applicants claims are definite and comprises elements that define the claims.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Peyrot discloses a down-flow fluid mixing apparatus comprising two or more distinct beds of particulate material separated by a vertical flow barrier that comprises a fluid impingement compartment located at the center of the barrier, wherein the flow barrier is capable of collecting, mixing, and redistributing the entire flow of fluid from a first bed to a second bed (Abstract):

Therefore, in its broadest sense, this invention is directed to a centrally located mixing section for receiving substantially the entire flow of fluid passing into a downstream bed which thoroughly mixes the fluid and passes it to the downstream particle bed in a balanced fashion to facilitate redistribution of the fluid. The mixing of the fluid is essentially derived by the configuration of the mixing zone.

(Col. 3, lines 45 – 52)

With specific reference to FIG. 1 the cutaway elevation view shows the column 1 with a fluid inlet nozzle located at its top and a fluid outlet located at its bottom. Located within this vessel are horizontal zones of catalyst 2, 12 and 14.

(Col. 4, lines 28 – 30; emphasis added)

As is clear from these quotations from Peyrot, Peyrot is at least missing the elements of “a distributor in fluid communication with an inlet through which reactants are introduced to said distributor, said distributor being disposed at a lower end of said vessel”. (Claim 1) Additionally, Peyrot states that “[t]he mixing of the fluid is essentially derived by the configuration of the mixing zone.” (Col. 3, lines 50 – 52) In other words, the downward flow through the particularly designed impingement component and other components of the mixing

device of Peyrot is their whole invention. There is no motivation or expectation of success that distribution of the fluid in an upflow direction would function in the design of Peyrot.

The Final Office Action (hereinafter FOA) cites to Peyrot that:

More limited embodiments of this invention involve different means for adding, distributing, collecting or withdrawing fluid that enters or exits the impingement compartment and particular arrangements or configurations of the fluid collection barrier between particle beds and the impingement compartment.

(Peyrot, Col. 3, lines 39 – 44; FOA, page 2) However, this statement is not enabling and is not even a teaching of the presently claimed invention.

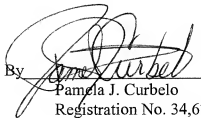
The FOA quotes Claims 11 and 12 of Peyrot, as well as Figure 1 to show that it “may be envisaged using the language of applicant’s claims”. (FOA, pages 3 – 4). Applicants do not deny that Peyrot has a vessel or even that they use a catalyst. Not only is the “language” used by Peyrot and Applicants different, but the mixing device of Peyrot is different than the claimed upflow reactor. Not only does Peyrot fail to teach several elements of the present claims, e.g., a “distributor being disposed at a lower end of said vessel and comprising a perforation”, a “collector being disposed at an upper end of said vessel and comprising a perforation”, as well as others, there is no motivation or expectation of success that the device of Peyrot could be modified to include these elements. Hence, there is not merely a difference in the language, the device of Peyrot and the claimed device are different for at least the reason that Peyrot fail to teach several elements of the present device, including the claimed distributor, the claimed collector, the claimed direction of flow, the claimed methods, as well as several elements specified in dependent claims. No *prima facie* case of obviousness has been established. Reconsideration and withdrawal of this rejection are respectfully requested.

It is believed that the foregoing remarks fully comply with the Final Office Action and that the claims herein are allowable to Applicants. Accordingly, reconsideration and withdrawal of the rejections and allowance of the case are respectfully requested.

The Examiner is invited to contact Applicant's attorneys at the below-listed phone number with any questions or issues. If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 07-0893.

Respectfully submitted,

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